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REMARKS

Claims 1-7, as amended, remain herein.

This Amendment places all claims 1-7 in condition for allowance, and surely in better condition for any appeal. Thus, entry of this Amendment and allowance of all claims 1-7 are respectfully requested.

Claims 1-7 have been amended for clarity and claim 1 also has been amended to recite removing at least one reaction product from a surface of the etched object by blowing the plasma-generating gas onto the object simultaneously while etching the object. See the specification, page 4, lines 25-27, describing after the process chamber 2 is evacuated, the plasma-generating gas is blown from the gas ejection holes 17a against the top side of wafer 7. Page 6, lines 4-23, describes helium flow causing plasma-generated fluorine radicals 30 to impact and react with wafer 7, while concurrently reaction product sulfur fluoride 32 is generated and removed by the flow of helium blown over wafer 7, as shown in Figs. 3A and 3B.

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Claim 3 has been amended to delete the element added to claim 1.

Claim 6 has been amended to recite the amount of helium contained in the plasma-generating gas as not greater than ten times the second amount of sulfur hexafluoride contained in the plasma-generating gas. See the specification at page 4, last paragraph.

1. An objection was stated to claim 6. Claim 6 has been amended as described herein, thereby mooting the objection.

2. Claims 1-3, 6 and 7 were rejected under 35 U.S.C. §102(b) over Cohen et al. U.S. Patent 6,110,836.

The presently claimed plasma-processing method comprises removing at least one reaction product from a surface of the object being etched by blowing the plasma-generating gas onto the object simultaneously while etching the object, as described above herein. This method is nowhere disclosed or suggested in the cited reference.

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The Office Action cites Cohen '836, column 3, line 57 to column 4, line 11, for allegedly disclosing removal of reaction products from a surface of an etched object. Cohen '836 describes removal of native oxides such as silicon oxide from the surface of the target substrate. However, Cohen '836 does not describe any timing relationship between etching the object and removing the reaction product from the chamber. There is nothing in the Cohen '836 reference to lead one to understand or assume that the timing relationship is simultaneous. Cohen '836 does not disclose or suggest removing at least one reaction product from a surface of the object being etched by blowing the plasma-generating gas onto the object simultaneously while etching the object, as recited in applicants' claim 1.

Claim 7 recites helium gas to "remove said at least one reaction product from a surface of such etched object." Cohen '836, column 3, lines 19-20, describes a different use of helium, namely, "[a] processing gas comprising helium as a carrier gas...", and does not describe using helium for removal purposes. Cohen '836, column 3, line 61 to column 4, line 10,

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describes helium only as for facilitating the reaction of formula (1) shown in column 4.

For the foregoing reasons, Cohen '836 fails to disclose all elements of applicants' claimed invention, and therefore is not a proper basis for rejection under §102. And, there is no disclosure or teaching in Cohen '836 that would have suggested the desirability of modifying any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Claims 2, 3, 6 and 7, which depend from claim 1, are allowable for the same reasons as claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

3. Claim 4 was rejected under 35 U.S.C. §103(a) over Cohen '836 and Yoshida et al. U.S. Patent 5,575,887. Also, claim 5 was rejected under 35 U.S.C. §103(a) over Cohen '836, Yoshida '887 and Blalock et al. U.S. Patent 6,413,875.

Claims 4 and 5 depend from claim 1 and therefore are patentable for the same reasons as claim 1.

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Moreover, the Office Action admits that Cohen '836 does not disclose a protective sheet affixed to a first side of the wafer, and cites Yoshida '887 for allegedly disclosing same. However, Yoshida '887 does not provide the deficiencies of Cohen '836.

The Office Action also admits that Cohen '836 and Yoshida '887 do not disclose cooling the mounting unit, and cites Blalock '875 for allegedly disclosing same. However, Blalock '875 does not provide the deficiencies of Cohen '836 and Yoshida '887 described herein.

For the foregoing reasons, none of Cohen '836, Yoshida '887 or Blalock '875 contains any teaching, suggestion, reason, motivation or incentive that would have led one of ordinary skill in the art to applicants' claimed invention. Nor is there any disclosure or teaching in any of these references that would have suggested the desirability of combining any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

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All claims 1-7 are now proper in form and patentably distinguished over all grounds of rejection cited in the Office Action. Accordingly, allowance of all claims 1-7 is respectfully requested.

Should the Examiner deem that any further action by the applicants would be desirable to place this application in even better condition for issue, the Examiner is requested to telephone applicants' undersigned representatives.

Respectfully submitted,

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